

ABSTRACT OF THE DISCLOSURE:

5 A video-on-demand system is comprised of a supervisor processor and a co-processor which are intercoupled via a bus. The supervisor processor has a supervisor memory and the co-processor has a co-processor memory. A supervisor control program is in the supervisor memory, which includes -a) a means for transferring a group of video data packets from an externally stored complete video into the supervisor memory, b) a means for building in the supervisor memory, 10 a respective subgroup of internet protocol headers for each video data packet in the group, and c) a means for constructing in the co-processor memory, a transmission control list which indicates how each video data packet in the group and its respective subgroup of internet protocol headers can be accessed from the supervisor memory. A co-processor control program is in the co-processor memory, which includes -a) a means for partitioning into pieces, each video data packet and its respective subgroup of internet protocol headers as 15 identified by the transmission control list, and b) a means for sending each piece, with an additional header, to an output port during spaced apart time slots. 20